

ENVIRONMENTAL Fact Sheet



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New Hampshire's Air Monitoring Network

New Hampshire has monitored ambient (outdoor) air quality since the early 1960s through a statewide network of air monitoring stations. Over the past four decades, the New Hampshire Department of Environmental Services has expanded this network to comply with federal requirements and to improve tracking of air quality throughout the state. The 2008 ambient air monitoring network now includes 19 different site locations which measure and track numerous air pollutants. DES and other organizations use air monitoring data to determine the status of New Hampshire's air quality, predict air pollution episodes, enact protective measures and warnings, protect public health, and protect the natural environment.



What air pollutants are measured by the air monitoring network?

New Hampshire's air monitoring network measures levels of pollutants identified as "criteria pollutants" by the U.S. Environmental Protection Agency. They include ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide, particulate matter, and lead. Criteria pollutants, at certain levels, have adverse effects on public health and the environment. For each criteria pollutant, EPA sets a health-based, or "primary" standard to protect public health and a welfare-based, or "secondary," standard to protect the environment, e.g., crops, vegetation, wildlife, visibility. DES and EPA evaluate the information from the air monitoring network to determine whether areas in New Hampshire are meeting or exceeding the air quality standards set by EPA and take corrective actions, as necessary.



Multi-Pollutant Air
Monitoring Station, Manchester

In addition to the criteria pollutants, DES partners with UNH and AMC to measure other pollutants through the air monitoring network, including air toxics, mercury, and ozone precursors (nitrogen oxides and volatile organic compounds). Most monitoring sites also measure meteorological parameters such as wind speed, wind direction, and temperature. The following table lists the 2008 air monitoring network site locations and the pollutants measured at each site. Site locations and parameters measured can change occasionally.

For information on New Hampshire's current air monitoring network, contact DES's Air Resources Division at (603) 271-1370, or visit the website at www.des.nh.gov. Additional information about the UNH monitoring sites is found at <http://airmap.unh.edu>.

New Hampshire Air Monitoring Network (as of April 2008)		
Location	Air Monitoring Station	Parameters Measured*
Claremont	South Street [DES]	O ₃ , PM _{2.5} , Met, Toxics, VOCs
Concord	Hazen Drive [DES]	O ₃ , Met, Laboratory
Durham	Thompson Farm [UNH]	O ₃ , CO, SO ₂ , NO, PM, Hg, Met
Farmington	Farmington [UNH]	O ₃ , CO, CO ₂ , Hg, Met
Keene	Water Street [DES]	O ₃ , PM _{2.5} , Met
Laconia	Green Street [DES]	O ₃ , PM _{2.5} , Met
Lebanon	Lebanon Airport [DES]	O ₃ , PM _{2.5} , Met
Manchester	Pearl Street [DES]	O ₃ , CO, NO ₂ , SO ₂ , PM _{2.5} , Toxics, VOCs, Met
Moultonborough	Castle Springs [UNH]	O ₃ , CO, SO ₂ , NO, PM, Met
Mt. Washington Area	Greens Grant [AMC/DES/USFS], Camp Dodge	O ₃ , PM _{2.5}
	Sargents Purchase [UNH/DES], Summit	O ₃ , NO, SO ₂ , CO
Nashua	Crown Street [DES]	PM _{2.5}
	Gilson Road [DES]	O ₃ , NO _{2.5} , Met
Pembroke	Highway Garage [DES/UNH]	SO ₂ , PM _{2.5} , Hg, CO ₂ , Met
Peterborough	Miller State Park [DES/UNH] Pack Monadnock	O ₃ , NO ₂ , PM _{2.5} , PAMS, Met, CO, NO, Hg, Met
Portsmouth	Pierce Island [DES]	O ₃ , NO ₂ , SO ₂ , PM _{2.5} , PM ₁₀ , Toxics, VOCs
Rye	Seacoast Science Center [DES]	O ₃ , Met
	Appledore Island [UNH]	O ₃ , CO, NO, NO ₂ , CO ₂ , PM, Hg, Met
Woodstock	Hubbard Brook [DES/HBRF/CASTNET]	O ₃ , Hg

*Abbreviations:

AMC	Appalachian Mountain Club
CASTNET	Clean Air Status and Trends Network (EPA & National Park Service)
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
O ₃	Ozone
HBRF	Hubbard Brook Research Foundation
Hg	Mercury
Met	Meteorological Data (e.g., temp.; wind speed and direction)
NO _x	Nitrogen Oxides, including Nitrogen Dioxide (NO ₂)
PAMS	Photochemical Assessment Monitoring Station
PM _{2.5}	Particulate Matter (≤ 2.5 microns in diameter) – filter-based and/or continuous monitoring
PM ₁₀	Particulate Matter (≤ 10 microns in diameter) – all filter-based monitoring
SO ₂	Sulfur Dioxide
VOCs	Volatile Organic Compounds
speciation	Identifying the components of a pollutant

(Lead is no longer monitored in New Hampshire as a criteria pollutant because levels have been well below the EPA standard for some time.) 4/08